AMENDMENT TO THE SPECIFICATION

In the Specification, please replace substituted paragraph 0006, 0007, 0008, and 00011 and 00012 with the following paragraphs:

[0006] The modular tension anchorage system of the present invention allows one to adapt the implant to various defect conditions encountered in revising (replacing) a loose femur implant stem or shaft component. The invention takes various defects that have t be dealt with into account with regard to the stem or shaft length and various additional anchoring possibilities in the proximal femur canal. The modular system essentially is comprised of a ~~femoral~~ femural or medullary stem or shaft (100), made up of one or more stem segments. The ~~femoral~~ femural stem or shaft 100 corresponds in size to a cylinder opening in the bone forming the femural or medullary canal, the projection lines of which are indicated at 110A in Figure 1, and which canal is located around the medullary canal axis 130.

[0007] Various stem segments must be used in sequence along this open cylinder along the medullary or femural canal and centered on the canal axis 130.[[:]] ~~the~~ The base or distal segment (100.3) may be of various lengths, and it is always comprised of the tip (102) and an axial or center cylinder (103). One stem segment--in rare instances two or more stem segments (100.2, 100.3)--may be arranged on top of each other along the axial cylinder (103). A shoulder segment (100.1) always follows or is placed above the inserted stem. The contact surface (105) on the proximal or upper end the base stem segment 100.3 is concave. The corresponding or mating distal end of the center or next higher stem segment is convex, or vice versa. The corresponding or mating ends of the stem segments may also engage one another conically or in other

words with the end of one segment having a cone shape and the end of the adjacent segment having a mating receptacle. A curved, interlocking surface design between the ends of the adjacent segments has proved to be particularly effective. Such a surface prevents a rotation and takes tension loads on the lateral side of the stem and compression loads on the medial side of the stem into account.

[0008] The axial cylinder (103) and the corresponding hole centered on axis 130 in which the axial cylinder 103 fits in the adjacent stem segments or shoulder segment 100.1 are smooth, or they are structured with a locating groove and nubs to prevent rotation. The length of the prosthesis is determined based on how far it needs to extend into the femur canal so the distal end is beyond bone defects. A center stem segment (100.2) is inserted with the hole (106) receiving the central axial cylinder (103) that is also in the base segment (100.3). The cross section (108) of the metaphysial or proximal shoulder segment (100.1) as shown in Figure 2 consists of the lateral cylinder (112), which is hollow (109), for receiving the central axial cylinder ~~103~~(103). The connecting segment (111), joins the lateral cylinder (112) and the medial portion (110), and the connecting segment (111) forms the convex-concave (104) convex contour of the dorsal side. The channel for the tension anchor (thrust rod) (50) passes through bore (113) across the extended areas of the medial portion of the metaphysial shoulder segment (100.1).

[0011] After making absolutely sure the diagnosis is loosening of the implanted hip prosthesis, the joint is exposed via the old access incision. The scar tissue is carefully removed, the joint is dislocated or separated from the femur shaft generally along plane 114, and the old, loose femur shaft is removed. Usually the old shaft can simply be pulled out; in a rare case, an instrument

needs to be used to hammer it out. The old bone cement and connective tissue in the femur canal are then carefully removed. An ultrasonic titanium chisel can be very useful in this procedure.

[0012] The bone channel, or femur canal from which the connective tissue has been removed, is rinsed carefully using a jet lavage, and the bony structure is then reconstructed. To do this, tissue bank bone is ground up in a mill, and this "morcellized" bone is mixed in a 50:50 ratio with a shell-shaped bone ceramic used as the granulate--for example: Synthacer.RTM.--and it is then forced up against the walls in the intermedullary or femur canal with the aid of a trial shaft. Drainage tubes are then inserted into the canal via the fossa intertrochanterica, and a vacuum is applied to these drainage tubes.

Then, the intermedullary tissue is carefully rinsed with H_2O_2 and the canal is filled with bone cement using a snorkel application system. The prosthesis stem assembly of the necessary length stem segments including at least the base stem segment (100.3) and, if needed, one other stem segment, and also the shoulder segment (100.1) are axially inserted into the femur bone canal, which is filled with bone cement and morcellized bone. After the cement has cured with the new femur stem and shoulder segment in place, a hole (113) is drilled in the prosthesis shoulder segment along the axis of the cone (300), and, if necessary, additional holes are drilled through the shoulder segment and cone, and the cone (300) is stably anchored into the bone of the femur by means of tension anchors (50) or tension screws (60) that extend through the femur and shoulder segment to clamp the cone in place. <u>The cone is positioned so the offset 101 of the center of rotation to the axis 130 is correct.</u> The screws (60) can also be advantageously screwed in through the still-soft cement, provided that holes were drilled in advance in the femur.

The advantage of this is that the bone cement shrinks onto the screw thread.